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CONSTANCE R. WHITE  
COUNTY CLERK  
NO: 22-1-00044-1

STATE OF WASHINGTON  
PIERCE COUNTY SUPERIOR COURT

STATE OF WASHINGTON,

NO. 22-1-00044-1

Plaintiff,

AFFIDAVIT OF PROBABLE CAUSE

v.

ELECTRON HYDRO, LLC,

Defendant.

CO-DEF: Thom Alfred Fischer, Pierce Cty Sup Ct No. 22-1-00045-9

The undersigned certifies that I am an Assistant Attorney General for the State of Washington and make this affidavit in that capacity; that criminal charges have been filed against the above-named defendants in this cause, and I believe probable cause exists for the arrest of the defendants on the charges because of the following facts and circumstances. This information is not based upon any independent or personal knowledge of these events, unless specifically noted.

The following is based on reports, statements, and items provided by law enforcement, investigators, regulatory agencies, experts, and public information and not on personal knowledge. The purpose of this affidavit is to establish probable cause for the crime charged, not to summarize the entire case.

AFFIDAVIT OF PROBABLE CAUSE

1

ATTORNEY GENERAL OF WASHINGTON  
Environmental Protection Division  
800 Fifth Avenue STE 2000  
Seattle, WA 98104  
(206) 464-7744

EH0029950

1 Electron Dam

2       The Electron Dam is a hydroelectric power generating plant located in the Puyallup River  
3 approximately twenty-three miles southeast of Tacoma, in Pierce County, Washington. The  
4 Puyallup River is home to nine salmonid species: including chinook salmon, coho salmon, chum  
5 salmon, pink salmon, sockeye salmon, steelhead trout, bull trout, mountain whitefish, and  
6 cutthroat trout. The Puyallup Tribe of Indians have fished the Puyallup River for time  
7 immemorial. Originally built in 1904, the Electron dam generates power by diverting water from  
8 the Puyallup River through a diversion dam. A long wooden flume carries the diverted water to  
9 a manmade reservoir, known as a forebay, which has an elevation of approximately 872 feet  
10 from the Puyallup River below. At the forebay, the diverted water is fed into large cylindrical  
11 pipes, known as penstocks. From there, the water falls down the 872 feet to a building known as  
12 the powerhouse. At the powerhouse, the high-pressure water then turns power-generating  
13 turbines, creating electricity. Conveyances from the powerhouse return the water back to the  
14 Puyallup River. See Figures 1-3.

15       Electron Hydro, LLC (Electron Hydro) was formed as a Foreign Limited Liability  
16 Company in Washington on May 29, 2013, with its original incorporation occurring in Delaware  
17 in April 2013. At all times of relevance to this investigation, Thom Fischer was the only  
18 registered agent and the only person named as governor of the business. Electron Hydro, LLC  
19 purchased the Electron Dam in 2014. Electron Hydro's website lists Thom Fischer as the  
20 company's Chief Operating Officer.

21 Electron Hydro's Proposed Construction Plan

22       Construction projects that occur in or around waters that may be subject to state and  
23 federal jurisdiction (wetlands, streams, lakes, or the coast) often require federal, state, and local  
24 permits. Of significance in this matter, Electron Hydro was required to obtain a Federal Clean  
25 Water Act permit, a Washington State Department of Fish and Wildlife Hydraulic Project  
26 Approval permit, and a Pierce County Shoreline Substantial Development permit. In order to

1 expedite and streamline the various permitting processes, a single application form, known as  
2 the Joint Aquatic Resource Permit Application (JARPA), is used. Applicants submit a JARPA  
3 through a permitting liaison and each permitting agency then evaluates the JARPA for the  
4 proposed project under each permitting regime.

5 The JARPA is broken down into sections that require an applicant to identify several  
6 significant components regarding the proposed project. The applicant must describe the project  
7 in detail and include the specific construction methods and equipment that they propose to use  
8 on the project. This includes a description of the nature of any fill material that may be used,  
9 including the amount and placement of any fill into the waterbody. At the end of the JARPA,  
10 the authorized signatories certify that the information provided in the application is true,  
11 complete and accurate, and that the signors have the authority to carry out the proposed activities.

12 In March 2017, Electron Hydro submitted a JARPA that led to the issuance of permits  
13 for the first phase of a construction project. The JARPA listed Thom Fischer as the owner,  
14 applicant, and the person responsible for the project. Fischer signed the document along with  
15 Chris Spens, Electron Hydro's Director of Regulatory and Government Affairs, who is listed as  
16 the authorized agent. Electron Hydro filed both a written summary of the work and detailed  
17 schematic plans for the project description. Electron categorized the construction as a  
18 maintenance project that included bank stabilization and channel modification. In the attached  
19 plans, Electron Hydro stated the purpose of the project was to repair the wooden diversion apron  
20 structure, replace the spillway with an inflatable rubber bladder, and reinforce the existing  
21 shoreline protection.

22 As part of the construction, Electron Hydro planned to construct a cofferdam and then  
23 alter the course of the river into a temporary bypass channel in order to complete their proposed  
24 work.

25 In the JARPA, Electron Hydro listed the fair market value of the project at  
26 "Approximately \$3.6M," likely meaning \$3,600,000. In addition to the JARPA, Electron Hydro

1 submitted several other documents to reviewing agencies, including a Biological Evaluation and  
2 an Engineering Report. None of the submitted plans included the use of artificial field turf or  
3 crumb rubber in the project. Before beginning this project, Electron Hydro needed the approval  
4 of a United States Army Corps of Engineers Nationwide Permit, a Washington Department of  
5 Fish and Wildlife Hydraulic Project Permit, and a Shoreline Substantial Development Permit.

6 United States Army Corps of Engineers Issuance of Nationwide Permits 3 and 13

7 The Secretary of the Army, acting through the Chief of Engineers, may issue permits for  
8 the discharge of dredged or fill material into the navigable waters at specified disposal sites,  
9 commonly known as Clean Water Act 404 permits. The United States Army Corps of Engineers  
10 (Corps) is responsible for the issuance of these permits. On August 8, 2018, the Corps notified  
11 Thom Fischer that, based upon the information Electron Hydro provided, Nationwide Permits  
12 (NWP) 3 (Maintenance) and 13 (Bank Stabilization) authorized Electron Hydro's Phase I  
13 construction project. The letter to Fischer specifically stated the nationwide permits authorized  
14 the "proposal as depicted on the enclosed drawings dated March 28, 2017." Attached to the letter  
15 were the schematics that Electron Hydro submitted with the JARPA. The letter further warned  
16 that any change in plans would require approval prior to commencing work and deviation from  
17 the approved plans could result in criminal penalties.

18 Washington Department of Fish and Wildlife Hydraulic Project Approval Permit

19 Washington State Department of Fish and Wildlife issued a Hydraulic Project Approval  
20 (HPA) permit applicable to this case on May 21, 2020, Permit Number 2018-6-256+02, and  
21 addressed it with attention to Thom Fischer.

22 The HPA permit set a number of conditions for the project. Electron Hydro and Thom  
23 Fischer violated two of the conditions of the permit. Condition Number 3, requires that Electron  
24 Hydro "must accomplish the work per plans and specifications submitted with the application  
25 and approved by the Washington Department of Fish and Wildlife, entitled '1-Electron Hydro  
26 JARPA\_Sup\_28Mar2017 Plans Reduced PDF', dated May 14, 2018, and 'Coffer Dam Left Bank

1 Upstream Repair', dated May 21, 2018." Neither of these documents contained plans for using  
2 artificial field turf or crumb rubber. Additionally, the HPA's Condition Number 25 required  
3 Electron Hydro to use "[u]se only clean, suitable material as fill material (no trash, debris, car  
4 bodies, tires, asphalt, concrete, etc.)."

5 Shoreline Substantial Development Permit

6 Pierce County administers the Shoreline Substantial Development Permit program  
7 consistent with the Shoreline Management Act and Pierce County Master Program for projects  
8 at the Electron Dam site. Electron Hydro submitted several documents to Pierce County as part  
9 of the shoreline application submittal process. None of these documents included the use of  
10 artificial field turf or crumb rubber.

11 In May 2018, the Pierce County Hearing Examiner conducted a public hearing regarding  
12 Electron Hydro's application. The Hearing Examiner made a number of exhibits part of the  
13 record and heard testimony from Chris Spens, among others. On June 26, 2018, Hearing  
14 Examiner Michael McCarthy submitted a Report and Decision approving the project. The  
15 Hearing Examiner stated that the decision was based upon the representations made and the  
16 exhibits admitted at the hearing. In the Report and Decision, the hearing examiner stated that  
17 any substantial change to the designs terms or conditions of the project shall be subject to the  
18 approval of the examiner and may require further additional hearings.

19 Placement of Artificial Turf and Crumb Rubber during Construction

20 On behalf of Electron Hydro, Thom Fischer submitted information to the Army Corps of  
21 Engineers (Corps) on August 21, 2020, and again to the United States Environmental Protection  
22 Agency (EPA) on January 8, 2021. In these responses, there were a number of statements  
23 regarding Electron Hydro's construction that took place in the summer of 2020. The construction  
24 of the temporary bypass channel commenced on July 15, 2020. From July 20, 2020 to July 22,  
25 2020, rolled up segments of artificial turf were placed on top of the wooden spillway and on the  
26 gravel bypass channel floor. The artificial turf was obtained from Washington Rock's King

1 Creek Pit, a nearby rock quarry. The submission stated, “[i]t is known that the turf was used and  
2 removed from a sports field due to the color and markings of the turf.” And that the “use of field  
3 turf material was not permitted.” According to the documents submitted, approximately 2,409  
4 square yards of artificial turf and sixteen to eighteen cubic yards of crumb rubber were placed in  
5 the channel.

6 Some of the people who were working for Electron Hydro in the summer of 2020  
7 provided statements about the construction and installation of the artificial turf. One of the  
8 employees, Derek van Giesen, was a construction worker at the Electron Hydro site in the  
9 summer of 2020 and made several statements about the construction. Van Giesen explained that  
10 Electron Hydro moved the river away from the flume to make repairs. As part of the construction  
11 project and at Thom Fischer’s direction, Electron Hydro placed pieces of artificial field turf that  
12 contained millions of tiny rubber beads at the temporary spillway. During construction of the  
13 temporary spillway, van Giesen saw water flowing under the plastic liner, which to him,  
14 resembled a big pillow. According to van Giesen, Fischer was present at the construction site  
15 during the placement of the artificial turf in the temporary spillway. Van Giesen took videos of  
16 the construction site during the installation of the artificial turf. In one of the videos, artificial  
17 field turf can be seen on the ground of a construction site. That video depicts unrolled artificial  
18 turf that contained a significant amount of black crumb rubber material. Van Giesen posted one  
19 of those videos on Facebook on July 31, 2020; Figures 4 and 5 are stills from that video.

20 Additionally, the Washington Attorney General’s Office interviewed Mallory Voyk. In  
21 the summer of 2020, Mallory Voyk was employed as a fish biologist for Electron Hydro. On or  
22 about July 24, 2020, Voyk stopped by the dam construction site. While on site, some of the  
23 workers drew her attention to the temporary bypass channel. In the temporary bypass channel,  
24 Voyk noticed loose crumb rubber on top of the liner and saw artificial turf being placed under  
25 the liner. Voyk also noticed that water from the Puyallup River had penetrated under the liner  
26 and through the artificial turf causing it to bulge. According to Voyk, the bulge resembled a

1 waterbed. Voyk took pictures of the installation and called her supervisor, Chris Spens, and  
2 warned him that Electron Hydro could not have the artificial turf in the river. Voyk additionally  
3 advised Thom Fischer, who was present at the construction site where the artificial turf was  
4 being placed in the bypass channel, that the placement of artificial turf and crumb rubber was  
5 unacceptable and that it could leak into the Puyallup River. Fischer assured Voyk that the liner  
6 was secure. After the river was diverted over the liner, Voyk recalled that coworkers at Electron  
7 Hydro informed her that the liner failed and released the plastic and crumb rubber in the Puyallup  
8 River. Voyk informed the Electron Hydro Site Manager, Cory Alefteras, that turf was in the river  
9 on August 1, 2020.

10 According to documents Electron Hydro submitted to EPA and Corps, they completed  
11 work on the temporary bypass channel on July 27, 2020. See Figure 6 for a photograph of the  
12 temporary bypass channel prior to the diversion of the river. On July 28, 2020, Electron Hydro  
13 diverted the flow of the Puyallup River into the temporary bypass channel. On July 30, 2020,  
14 the plastic liner ruptured and as a result, approximately 617 square yards of field turf material  
15 and 4-6 cubic yards of crumb rubber were discharged into the river. Electron Hydro received a  
16 Stop Work Order from Pierce County on or about August 6, 2020, and stopped all work at that  
17 time. The Corps issued a Stop Work Order on August 7, 2020. The river remained diverted and  
18 the artificial turf remained in the bypass channel until on or about October 25, 2020, when the  
19 river was re-diverted to the left bank.

20 In a letter dated September 10, 2020, addressed to federal, state, and local agencies, and  
21 the Puyallup Tribe of Indians, Thom Fischer wrote, “[o]n behalf of the owners, the entire team  
22 at Electron Hydro, and myself personally, I am writing to apologize and take responsibility for  
23 the release of debris in the Puyallup River.” Fischer further stated:

24 In order to make sure the HDPE liner would not be compromised, we decided to  
25 lay field turf containing sand and crumb rubber (used in soccer and football fields)  
26 under the geofabric to pad the rocks and make the HDPE more puncture resistant.  
It was expected that this turf would never make contact with the water of the river.  
Unfortunately, the steep channel caused the turf to slide, thereby causing the liner

1 to rip. This failure released field turf into the river, including an estimated 4-6  
2 cubic yards of crumb rubber (produced from vehicle tires). While at the time it  
seemed needed to prevent greater problems, that choice was wrong.

3 The University of Washington-Tacoma Center for Urban Waters performed chemical  
4 analysis on samples of the turf and crumb rubber that Electron Hydro installed in the temporary  
5 bypass that was later recovered from the Puyallup River and stored at the Electron facility. These  
6 samples were tested under the direction of Associate Professor Edward Kolodziej. Analysis of  
7 these samples revealed that all of the crumb rubber samples contained the chemical 6PPD-  
8 Quinone, a chemical compound known to be present in tires. According to Associate Professor  
9 Kolodziej, 6PPD-Quinone is water soluble and easily capable of mobilizing from rubbers into  
10 water when wetted. 6PPD-Quinone is extremely toxic to coho salmon, and is among the most  
11 acutely toxic compound known to exist for fish. In addition to 6PPD-Quinone, Associate  
12 Professor Kolodziej stated that many other synthetic chemicals were present in crumb rubber  
13 and polluted the river upon discharge.

14 In summary, Electron Hydro, under the direction of Thom Fischer, placed artificial turf  
15 containing crumb rubber in the temporary bypass channel during construction on or about July  
16 20, 2020. Waters of the state began making contact with the artificial turf and crumb rubber on  
17 or about July 24, 2020. Additionally, Electron Hydro continued to work at the construction site  
18 and diverted the Puyallup River over the artificial turf and crumb rubber from July 28, 2020,  
19 until Electron Hydro received a Stop Work Order at the site on August 6, 2020. Given these  
20 dates, Electron Hydro and Thom Fischer discharged artificial turf and crumb rubber into the  
21 Puyallup River in Pierce County, Washington, for a total of fourteen days before receiving a  
22 Stop Work Order. Additionally, Electron Hydro first used the artificial turf without approval for  
23 a total of eighteen days before it received a Stop Work Order.



**Bail/Conditions of Release**

If Defendant Thom Fischer appears out of custody at his arraignment, then the State has no objection to releasing him on his personal recognizance provided he notify the State of any change of address and has no new criminal law violations.

Based upon a review of databases maintained by the state and federal agencies, the Prosecutor's understanding of the defendant's criminal history is set forth in Appendix A attached hereto and incorporated herein by reference.

I certify (or declare) under the penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

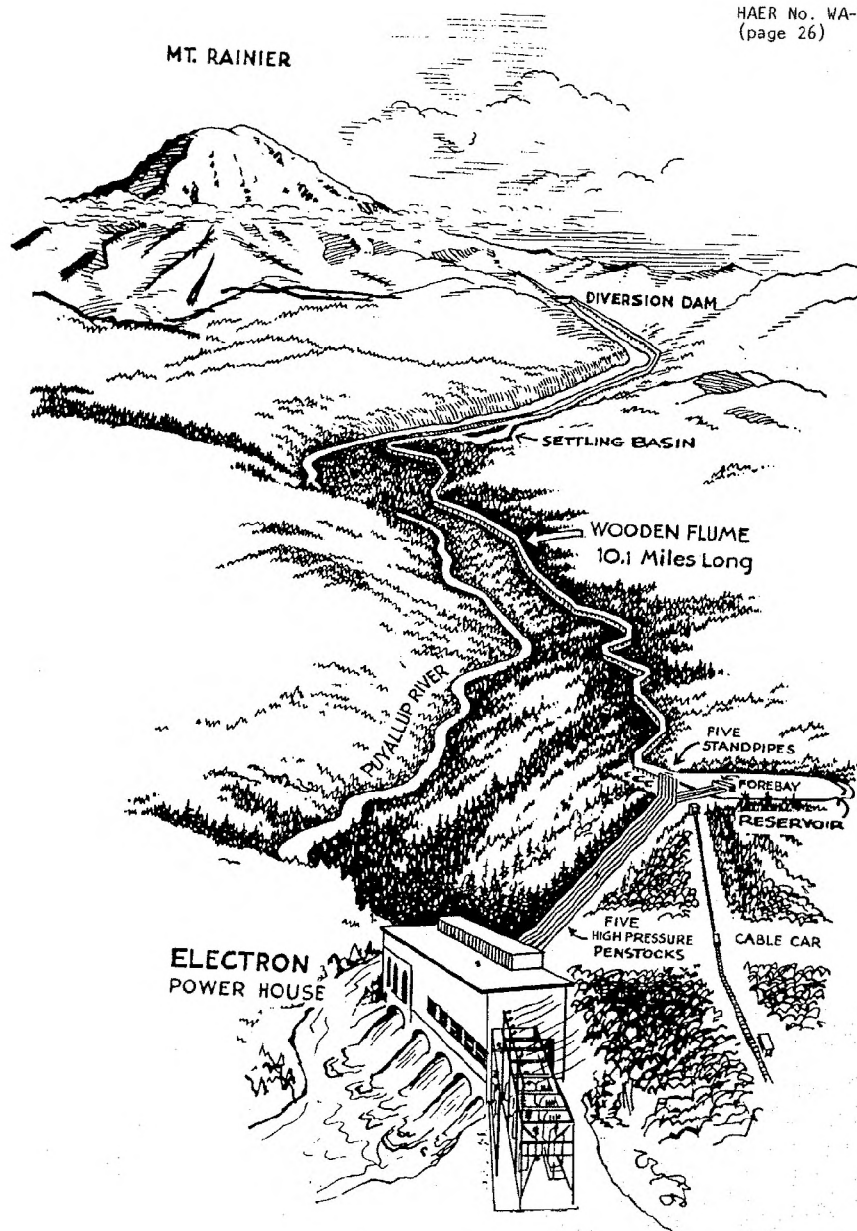
DATED this 10th day of January, 2022, at Seattle, Washington.

ROBERT W. FERGUSON  
Attorney General

/s/Bradley Roberts  
BRADLEY ROBERTS, WSBA #48861  
Assistant Attorney General  
Attorneys for Plaintiff

# Figure 1

HAER No. WA-12  
(page 26)



This figure was taken from the National Park Service's Historic American Engineering Record, "Electron Hydroelectric Project (Puyallup Project)" Haer No. WA-12, 1986. Available at: <http://lcweb2.loc.gov/master/pnp/habshaer/wa/wa0100/wa0187/data/wa0187data.pdf>. Last visited on December 20, 2021.

## Figure 2



Electron Dam, prior to the commencement of construction in the summer of 2020. Electron submitted this photograph to Pierce County as Part of their Phase I Engineering Design Report, dated February 2017.

## Figure 3



Electron Dam, prior to the commencement of construction in the summer of 2020. Electron submitted this photograph to Pierce County as Part of their Phase I Engineering Design Report, dated February 2017. [Overlay text removed]

# Figure 4



A still picture from the video Derek van Giesen posted to Facebook on July 31, 2020.

## Figure 5



A still picture from the video Derek van Giesen posted to Facebook on July 31, 2020.

# Figure 6



A photograph of the liner prior to diverting flows to the right bank - July 27, 2020. This photograph was included in a report prepared by Shane Cherry Consulting.